



# Technical Data Sheet

## 3.0mm Multi-Color Round Type LED Lamps

### 209SDRSYGW/S530-A3

#### ■ Features :

- Two chips are matched for uniform light output, wide viewing angle
- Long life-solid state reliability
- I.C. compatible/Low power consumption

#### ■ Descriptions :

- The 209 LED lamps contain two integral chips and is available as both bicolor and bipolar types.
- The Super Deep-Red and Super Yellow Green light is emitted by diodes of AlGaInP and AlGaInP respectively.
- Type of bipolar lamps are both White Diffused and Color Diffused while the bicolor are White Diffused.



#### ■ Applications :

- TV set
- Monitor
- Telephone
- Computer

| PART NO.           | Chip     |                    | Lens Color     |
|--------------------|----------|--------------------|----------------|
|                    | Material | Emitted Color      |                |
| 209SDRSYGW/S530-A3 | AlGaInP  | Super Deep-Red     | White Diffused |
|                    | AlGaInP  | Super Yellow Green |                |

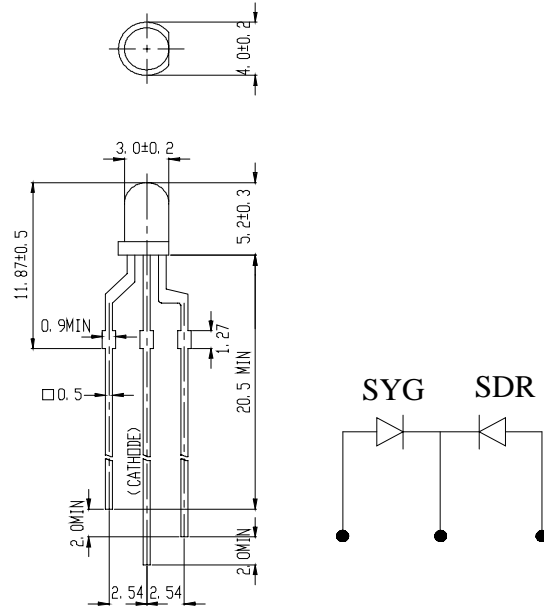


# Technical Data Sheet

## 3.0mm Multi-Color Round Type LED Lamps

### 209SDRSYGW/S530-A3

#### Package Dimensions



**Notes:** 1. All dimensions are in millimetres

- 2. An epoxy meniscus may extend about 1.5mm(0.059") down to the lead.
- 3. Tolerances unless Dimension  $\pm 0.25$ mm.

#### The Hyper Red and Super Yellow Green

| Parameter               | Symbol   | Rating      |     | Unit |
|-------------------------|----------|-------------|-----|------|
| Current                 | IF       | SDR/S530    | 25  | mA   |
|                         |          | SYGW/S530   | 25  |      |
| Operating Temperature   | Topr     | -40 to +85  |     | °C   |
| Storage Temperature     | Tstg     | -40 to +100 |     | °C   |
| Soldering Temperature   | Tsol     | 260 $\pm$ 5 |     | °C   |
| Electrostatic Discharge | ESD      | 2000        |     | V    |
| Power Dissipation       | Pd       | SDR/S530    | 60  | mW   |
|                         |          | SYGW/S530   | 60  |      |
| Peak Forward Current    | IF(Peak) | SDR/S530    | 160 | mA   |
|                         |          | SYGW/S530   | 160 |      |
| Reverse Voltage         | VR       | 5           |     | V    |

Note: \*1:IFP Conditions --Pulse Width  $\leq$  1msec and Duty  $\leq$  1/10.

\*2:Soldering time  $\leq$  5 seconds.



# Technical Data Sheet

## 3.0mm Multi-Color Round Type LED Lamps

### 209SDRSYGW/S530-A3

#### Electro-Optical Characteristics (Ta=25°C)

| Parameter                    | Symbol                  | Min. | Typ. | Max. | Unit | Condition              |
|------------------------------|-------------------------|------|------|------|------|------------------------|
| Luminous Intensity           | I <sub>v</sub> SDR/S530 | 25   | 50   | /    | mcd  | I <sub>F</sub> = 20 mA |
|                              | SYGW/S530               | 16   | 32   | /    |      |                        |
| Viewing Angle                | 2θ 1/2                  | /    | 80   | /    | deg  | I <sub>F</sub> = 20 mA |
| Peak Wavelength              | λ <sub>p</sub> SDR/S530 | /    | 650  | /    | nm   | I <sub>F</sub> = 20 mA |
|                              | SYGW/S530               | /    | 575  | /    |      |                        |
| Dominant Wavelength          | λ <sub>d</sub> SDR/S530 | /    | 639  | /    | nm   | I <sub>F</sub> = 20 mA |
|                              | SYGW/S530               | /    | 573  | /    |      |                        |
| Spectrum Radiation Bandwidth | Δλ SDR/S530             | /    | 20   | /    | nm   | I <sub>F</sub> = 20 mA |
|                              | SYGW/S530               | /    | 20   | /    |      |                        |
| Forward Voltage              | V <sub>F</sub> SDR/S530 | /    | 2.0  | 2.4  | V    | I <sub>F</sub> = 20 mA |
|                              | SYGW/S530               | /    | 2.0  | 2.4  |      |                        |
| Reverse Current              | I <sub>R</sub>          | /    | /    | 10   | μ A  | V <sub>R</sub> = 5 V   |



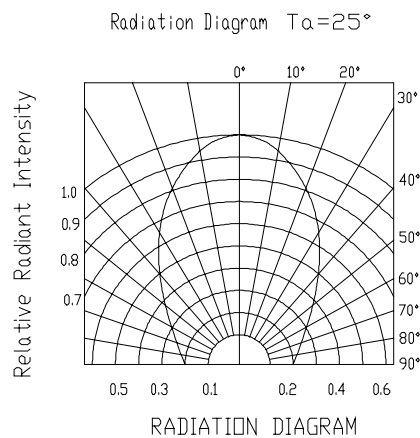
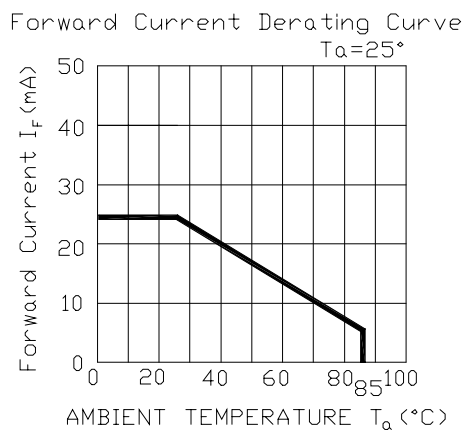
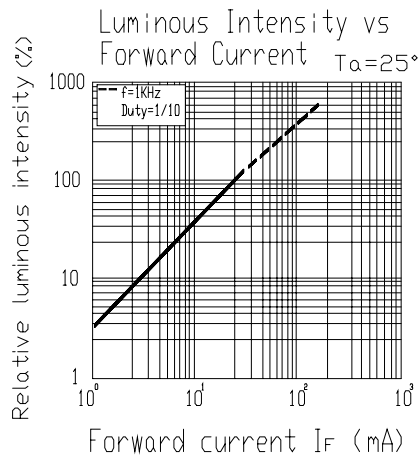
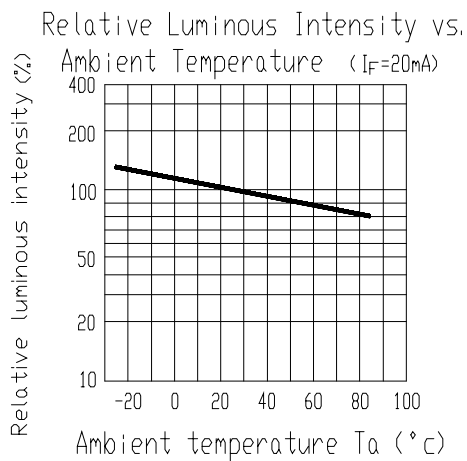
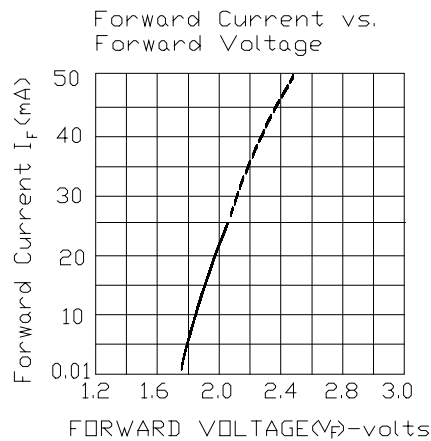
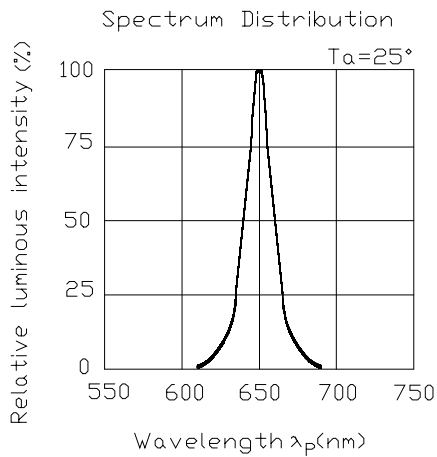
# Technical Data Sheet

## 3.0mm Multi-Color Round Type LED Lamps

### 209SDRSYGW/S530-A3

#### ■ Typical Electro-Optical Characteristic Curves:

( SDR )



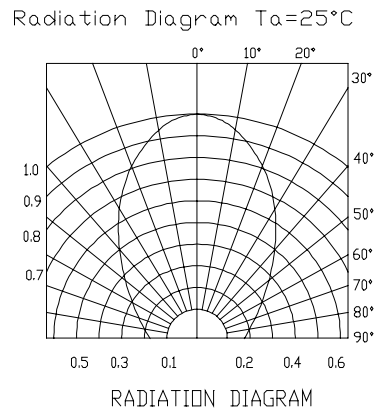
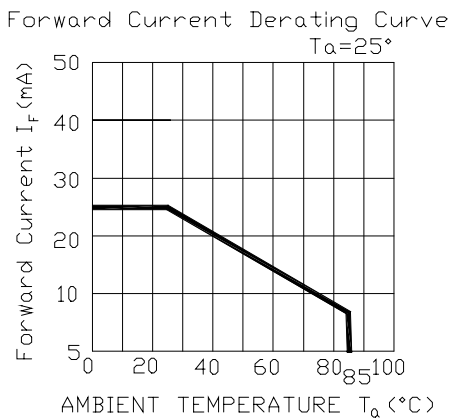
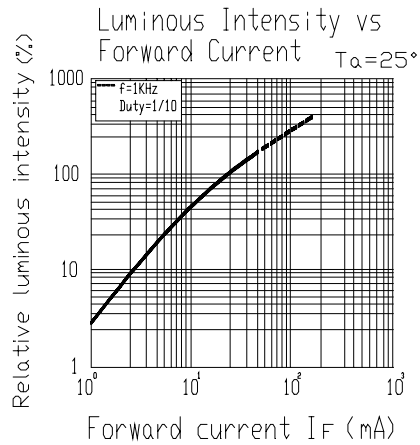
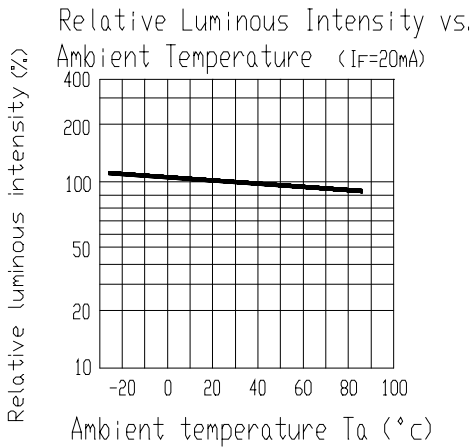
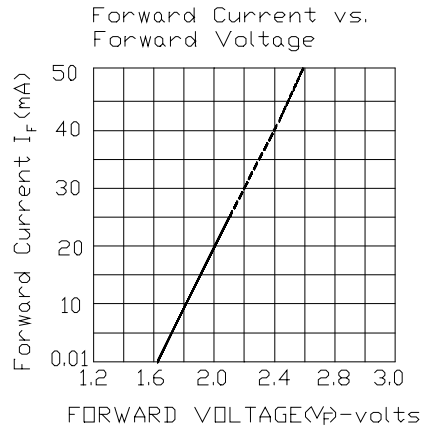
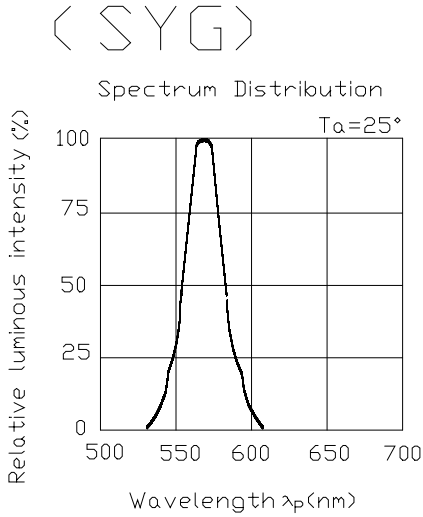


# Technical Data Sheet

## 3.0mm Multi-Color Round Type LED Lamps

### 209SDRSYGW/S530-A3

#### Typical Electro-Optical Characteristic Curves:





## Technical Data Sheet

### 3.0mm Multi-Color Round Type LED Lamps

#### 209SDRSYGW/S530-A3

■ Reliability test items and conditions:

| NO | Item                             | Test Conditions                                | Test Hours/Cycle | Sample Size | Ac/Re |
|----|----------------------------------|--|------------------|-------------|-------|
| 1  | Solder Heat                      | TEMP : 260°C ± 5 °C                            | 10 SEC           | 76 PCS      | 0/1   |
| 2  | Temperature Cycle                | H : +100°C 15min<br>∫ 5 min<br>L : -40°C 15min | 300 CYCLES       | 76 PCS      | 0/1   |
| 3  | Thermal Shock                    | H : +100°C 5min<br>∫ 10 sec<br>L : -10°C 5min  | 300 CYCLES       | 76 PCS      | 0/1   |
| 4  | High Temperature Storage         | TEMP : 100°C                                   | 1000 HRS         | 76 PCS      | 0/1   |
| 5  | Low Temperature Storage          | TEMP : -40°C                                   | 1000 HRS         | 76 PCS      | 0/1   |
| 6  | DC Operating Life                | TEMP : 25°C<br>IF = 20mA                       | 1000 HRS         | 76 PCS      | 0/1   |
| 7  | High Temperature / High Humidity | 85°C / 85% RH                                  | 1000 HRS         | 76 PCS      | 0/1   |



# Technical Data Sheet

## 3.0mm Multi-Color Round Type LED Lamps

**209SDRSYGW/S530-A3**

### Packing Quantity Specification

1.500PCS/1Bag , 6Bags/1Box

2.10Boxes/1Carton

### Label Form Specification

EVERLIGHT

CPN:

P/N:



209SDRSYGW/S530-A3

QTY:



CAT:

HUE:

REF:

LOT NO: EL



MADE IN TAIWAN

CPN: Customer's Production Number

P/N : Production Number

QTY: Packing Quantity

CAT: Ranks

HUE: Peak Wavelength

REF: Reference

LOT No: Lot Number

MADE IN TAIWAN: Production Place

### Notes

1. Above specification may be changed without notice. EVERLIGHT will reserve authority on material change for above specification.
2. When using this product, please observe the absolute maximum ratings and the instructions for using outlined in these specification sheets. EVERLIGHT assumes no responsibility for any damage resulting from use of the product which does not comply with the absolute maximum ratings and the instructions included in these specification sheets.
3. These specification sheets include materials protected under copyright of EVERLIGHT corporation. Please don't reproduce or cause anyone to reproduce them without EVERLIGHT's consent.

EVERLIGHT ELECTRONICS CO., LTD.

Office: No 25, Lane 76, Sec 3, Chung Yang Rd,

Tucheng Tainei 236 Taiwan R O C.

Tel: 886-2-2267-2000, 2267-9936

Fax: 886-2267-6244, 2267-6189, 2267-6306

<http://www.everlight.com>